FlyBy Math^{TM} Alignment
South Dakota Mathematics Content Standards
May 17, 2004

Algebra Standards

Indicator 3: Interpret and develop mathematical models.

Standard and Supporting Skills	*FlyBy Math*^{TM} Activities
9-12.A.3.1. (Application) Create linear models to represent problem situations.	--Represent distance, speed, and time relationships for constant speed cases using linear equations and a Cartesian coordinate system.

Indicator 4: Describe and use properties and behaviors of relations, functions, and inverses.

Standard and Supporting Skills	*FlyBy Math*^{TM} Activities
9-12.A.4.1. (Application) Use graphs, tables, and equations to represent linear functions.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.

Geometry Standards

Indicator 2: Use properties of geometric figures to solve problems from a variety of perspectives.

Standard and Supporting Skills	*FlyBy Math*^{TM} Activities
9-12.G.2.3. (Application) Use proportions to solve problems.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Measurement Standards

Indicator 1: Apply measurement concepts in practical applications.

Standard and Supporting Skills	*FlyBy Math*^{TM} Activities
9-12.M.1.1. (Comprehension) Choose appropriate unit label, scale, and precision.	--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.
9-12.M.1.2. (Comprehension) Use suitable units when describing rate of change.	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Interpret the slope of a line in the context of a distance-rate-time problem.

Number Sense Standards

Indicator 3: Develop conjectures, predictions, or estimations to solve problems and verify or justify the results.

Standard and Supporting Skills	*FlyBy Math*[TM] Activities
9-12.N.3.1. (Analysis) Use estimation strategies in problem situations to predict results and to check the reasonableness of results.	--Predict outcomes and explain results of mathematical models and experiments.
9-12.N.3.2. (Comprehension) Select alternative computational strategies and explain the chosen strategy.	--Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system. --Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

Statistics and Probability Standards

Indicator 1: Use statistical models to gather, analyze, and display data to draw conclusions.

Standard and Supporting Skills	*FlyBy Math*[TM] Activities
9-12.S.1.1. (Analysis) Draw conclusions from a set of data.	--Use tables, bar graphs, line graphs, equations, and a Cartesian coordinate system to draw conclusions.
9-12.S.1.3. (Analysis) Represent a set of data in a variety of graphical forms and draw conclusions.	--Represent distance, rate, and time data using tables, line plots, bar graphs, and line graphs. --Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.